EAPS 327 Climate, Science, & Society

Fall 2014

MWF 1:30-2:45 (Krannert G016)

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**Course Overview:**

Climate change is one of the most complex, researched problems of the day, spanning disciplines as far ranging as atmospheric chemistry, biogeochemistry, economics, ethics, policy, and ecology. The scientific activities undertaken to understand climate change have made huge strides in advancing our understanding of this problem and the vast majority of climate scientists agree that the climate is changing and that human activity is contributing to the vast majority of the warming. At the same time, however, almost a quarter of the US population either doesn’t believe the claims of anthropogenic global warming or believe it is a hoax perpetrated by greedy scientists wanting to ensure continued funding for their research. Why is it that so many Americans doubt the veracity of AGW? Why does the US Congress seem to be stuck in making any progress toward responding to climate change? What does the science say about AGW?

The purpose of this course is to explore the problem of climate change by first addressing the science behind why the climate is changing. The second portion of the course will be directed toward evaluating potential means of dealing with the problem.

**Required Text:**

Archer, David and Stefan Rahmstorf. 2010. *The Climate Crisis: An Introductory Guide to Climate Change.* Cambridge University Press.

*Optional* - Archer, David. 2012. *Global Warming: Understanding the Forecast*. John Wiley & Sons, Inc.

**Grading Scale:**

|  |  |  |
| --- | --- | --- |
| A | 93-100 | 4 |
| A- | 90-92 | 3.7 |
| B+ | 87-89 | 3.3 |
| B | 83-86 | 3 |
| B- | 80-82 | 2.7 |
| C+ | 77-79 | 2.3 |
| C | 73-76 | 2 |
| C- | 70-72 | 1.7 |
| D+ | 67-69 | 1.3 |
| D | 63-66 | 1 |
| D- | 60-62 | .7 |

**Grading Criteria:**

|  |  |
| --- | --- |
| Participation/Professionalism | 50 |
| Current Events (10) | 200 |
| Current Event Presentation (Group) | 50 |
| Nation Report (Group) | 200 |
| Nation Presentation (Group) | 200 |
| Exams (2) | 300 |
| TOTAL | 1000 |

**Exams:**

Exams are scheduled in advance and will typically consist of multiple choice, short answer, and fill in the blank questions. Missing an exam will result in ‘zero’ points for that exam, unless the student meets the requirements under the following circumstances.

**Deadline/Exam Policy**

Extensions to deadlines and make-up exams will only be granted under the following circumstances:

* The student makes the request for extension with the instructor at least 48 hours prior to the day of the exam.
* Student provides documented personal, family or medical emergencies in accordance with university policies.

**Late Assignments:**

Assignments not turned in on time will be graded down 10% for every day late. Example: if you turn in the team assignment 4 days late, 40% will be deducted from the total.

**Participation/Professionalism**

Attendance is not required; however attendance will be taken on most days. Students are allowed 3 “free” absences. Any absence beyond 3 will result in a deduction of 10pts from your Participation/Professionalism grade. **Do NOT contact the instructor if you miss class.**

**Current Event**

Current Events will be identified and discussed on most Fridays. Students are to identify a current event related to climate change and write a two paragraph reflection. Current events can include, but are not limited to: news articles, news videos, published scholarly journals, etc. The first paragraph will summarize the event and the second paragraph will provide commentary on the significance of the event.

**Current Event Presentation**

Groups will present on a current event of their choice in a prescheduled fashion. Allow for 10 minutes to present your current event to the entire class.

**Group Presentations/Project**

Student teams will be tasked with representing a nation and preparing a report on such things as emissions, vulnerabilities, adaptive strategies, and mitigation measures. The reports should be detailed and evaluate the opportunities, barriers and likelihood of adopting such strategies on a global basis. The reports should also identify the likely costs, potential for CO2 reductions, possible ecological and environmental impacts, and a synopsis of the politics related to the strategy. Each report will also include a quantitative analysis of the potential carbon emissions reductions under their mitigation strategy. In addition to the report, students will develop & deliver a presentation to the entire class.

**Class Policies:**

**Students with Disabilities**

If you have a disability that requires academic accommodation, please make an appointment to speak with the instructor within the first three weeks of the semester in order to discuss any adjustments.  It is important that we talk about this at the beginning of the semester. Please note that university policy requires all students with disabilities to be registered with htt[p://www.purdue.edu/drc/ be](https://owa.purdue.edu/owa/redir.aspx?C=05b06fe97661454fb878a549453487a0&URL=http%3a%2f%2fwww.purdue.edu%2fdrc%2f)fore classroom accommodations will be provided.

**Academic Integrity**

Plagiarism will result in an F in the course at the discretion of the instructor and in accordance with the University's policy on plagiarism. Cheating is not tolerated in this course. If you cheat or plagiarize during this course you will receive an F and be dismissed from the course. You will also be reported to the Dean of Students Office for disciplinary action. Please refer to the Purdue student guide on academic integrity: htt[p://www.purdue.edu/odos/aboutodos/academicintegrity.php. S](https://owa.purdue.edu/owa/redir.aspx?C=05b06fe97661454fb878a549453487a0&URL=http%3a%2f%2fwww.purdue.edu%2fodos%2faboutodos%2facademicintegrity.php)tudents should purchase A Writer's Reference by Diana Hacker, available at most book stores, for information on proper citation format.

**Campus Emergencies**

If you are sick, do not come to class. Notice that attendance is not required for the semester. You are always responsible for material and information presented in class even if you choose not to attend. In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be the result of a revised semester calendar or other circumstances beyond the instructor’s control. For additional information please go to the campus emergency planning site. <http://www.purdue.edu/emergency_preparedness/>

**Classroom Etiquette**

* No recording or videotaping of lecture material
* No sleeping
* No disruptive behavior

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| --- | --- | --- |
| Date | Topic | Readings/Assignments/Activities |
| 8/26 | Course Introductions | In class self-assessment, Assessment Quiz |
| 8/28 | History of Climate Change | “The Discovery of Global Warming” Weart. [Linky](http://www.aip.org/history/climate/summary.htm) Group Formation |
| 9/2 | “Wicked” Problems/Science Intro  Weather vs. Climate | Kolko, Jon. 2012. “Wicked Problems: Problems Worth Solving”.[Linky](http://www.ssireview.org/articles/entry/wicked_problems_problems_worth_solving): Chapter 1 |
| 9/4 | **Current Event** Climate Science | **Groups A&B Present** Carbon Cycle |
| 9/9 | Earth’s Energy Budget | Chapter 2 |
| 9/11 | **Current Event** | **Groups C&D Present** |
| 9/16 | Climate Change So Far | Chapter 3 |
| 9/18 | **Current Event** Snow & Ice | Chapter 4 **Groups E&F Present** |
| 9/23 | Oceans | Chapter 5 |
| 9/25 | **Current Event** Oceans Cont. | **Groups G&H Present** |
| 9/30 | Paleoclimate | Chapter 6 |
| 10/2 | **Current Event** Paleoclimate cont. | **Groups I&J Present** |
| 10/7 | Future Impacts | Chapter 7 |
| 10/9 | **Current Event** Impacts cont | **Groups K&L Present** |
| 10/14 | **Fall Break** | **Fall Break** |
| 10/16 | **Current Event** Climate Science | Chapter 8 **Group M&N Presents** |
| 10/21 | Climate Science | Science wrap-up |
| 10/23 | **Current Event** Climate as Security Issue | Schwartz, Peter and Randall, Doug. 2003. “An Abrupt Climate Change Scenario and Its Implications for United States National Security.” [Linky](http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ada469325%26%238206%3B) |
| 10/28 | Arguments From Denial | Myth Busters |
| 10/30 | **Current Event** Arguments From Denial | Myth Busters |
| 11/4 | **EXAM 1** | **EXAM 1** |
| 11/6 | **Current Event** |  |
| 11/11 |  |  |
| 11/13 | **Presentations** |  |
| 11/18 | **Presentations** |  |
| 11/20 | **Presentations** |  |
| 11/25 | **No Class** | **No Class** |
| 11/27 | **Thanksgiving Break** |  |
| 12/2 | **Presentations** |  |
| 12/4 | **Presentations** | **Nation Report Due** |
| 12/9 | Media | Painter, James. 2011 “Poles Apart: The International Reporting of Climate Skepticism.” The Reuters Institute for the Study of Journalism. Executive Summary. [Linky](https://reutersinstitute.politics.ox.ac.uk/fileadmin/documents/Publications/Other_publications/Poles_Apart_Executive_Summary.pdf) |
| 12/11 | Movie | TBA |

Final TBA

**\*The instructor reserves the right to alter this syllabus. Check email regularly for potential updates.**